

REMARKS

Claims 1-10 are pending in the application. Claims 1-10 were rejected under 35 U.S.C §102 as being anticipated by D'Luna et al. or as being obvious over D'Luna under 35 U.S.C. §103.

It is respectfully contended that D'Luna is not applicable to the present invention and even if one would have try to use D'Luna in accordance with the problem being addressed by the present invention one would not come up with the present claimed invention from the teachings of D'Luna. The claims have been further clarified to bring out these distinction.

It should firstly be pointed out that despite the Examiner's remarks, D'Luna is not an "over-sampling" FIR filter. No where at all does D'Luna in any place mention that it is an "over-sampled" FIR filter.

Quite the contrary, D'Luna is teaching a single integrated circuit that has certain features whereby it can be reconfigured to be used in multiple processing situations. One of the processing situations in which it can be reconfigured is for its use as a FIR filter. However, not as an over-sampled FIR filter. D'Luna teaches a common mechanism whereby based upon a controlled mode it can be reconfigured either as a sequentially matrix multiplier, a parallel matrix multiplier, a convolver, and a finite input response filter. However, it never mentions anything about an over-sampled FIR filter.

As is explained in the present invention, an over-sampled FIR filter is one type of a FIR filter not just a general FIR filter.

Furthermore, the present invention is addressing a particular unique problem where the over-sampling rate changes. This is caused by having a clock with a frequency higher than the frequency of the input data and thus changing the sampling rate. No where in D'Luna does he in

any way mention changing the sampling rate since he does not even provide for any over-sampling.

Accordingly, it is believed that D'Luna is not an applicable reference in that it does not even address an over-sampling filter. Furthermore, it does not address the problem of changing the over-sampling rate in such a filter.

Additionally, even if one would to try and utilize the structure of D'Luna for an over-sampling filter, one would not learn the uniqueness of the present invention. The present invention teaches that each of the selectors initially sorts out a predetermined fixed number of tap selectors to choose from. By way of example, each of the individual selectors can select four taps. However, the present invention teaches that when there is a change in the over-sampling rate, at least one selector changes its determined number of input taps. For example, instead of receiving four taps, it can receive three taps or five taps. Furthermore, when one selector makes a change by increasing or reducing the number of taps that it receives as its input, at least one other selector must also make a change in the number of taps input that it receives.

The result however is that the input data is always multiplied by the same total number of taps cumulatively by all the selectors and furthermore all in the same sequence.

Quite the contrary, what D'Luna teaches is that each of the multiplexes (selectors) always receives the same number of taps selectors. For example, in Fig. 2 it is always three taps selector coefficients that it receives.

While in some embodiments it is a different one of the tap selectors so that it is not always the same selectors, nevertheless the number of tap selectors that it receives is always the same no matter how the particular instrument is reconfigured.

Accordingly, in the sections quoted by the Examiner in column 5, lines 50-62, it is always the same input number of taps that the multiplexes receive. Likewise when it is configured as described in column 6, lines 63-69, it may receive three different coefficients but it is still the number three taps that it receives. No where in D'Luna does it teach that the total number of input taps that a selector receives increases or decreases. It is always the same total number of input taps. It may be different ones of the taps, but the total number of input taps remains the same for each multiplexes.

Accordingly, D'Luna does not in any way teach the problem of the present invention. It is totally for a different purpose. However even if one would to try and utilize D'Luna for addressing the problem of the present invention, he would not learn to change the number of individual input taps to a particular selector. He would not learn that the total cumulative number and the sequence of the total taps remain the same. However in our invention each selector may receive more or less of individual number of tap inputs based upon the over-sampling rate change.

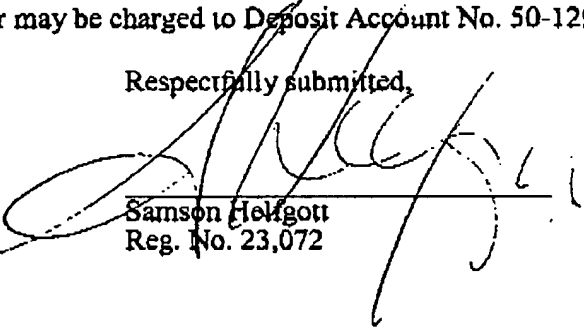
The claims have now been further amended to more particularly bring out these features. Specifically, it now recites that each selector initially starts out with its own predetermined number of individual tap factors that it receives. It further indicates that when a change is made in accordance with the change in the number of over-sampling, that predetermined number of individual tap inputs that it receives changes. Furthermore, it also points out that at least one other of these selectors must likewise change its respective individual number of input taps that it receives. However, the total result is that the input data is still sampled by the same cumulative total number of taps and always in the same sequence.

It is believed that neither D'Luna, nor any of the other references cited by the Examiner provide any indication of the problem that we are addressing and clearly do not provide for any teachings of the solution that we now claim. Accordingly, it is respectfully submitted that the Examiner processes this application to allowance.

In view of the remarks set forth above, this application is in condition for allowance which action is respectfully requested. However, if for any reason the Examiner should consider this application not to be in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Respectfully submitted,


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